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VIA ELECTRONIC FILING

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**Re: Application of Duke Energy Carolinas, LLC for Approval of Decision
to Incur Nuclear Generation Pre-construction Costs
Docket No. 2007-440-E**

Dear Mr. Terreni:

Enclosed for filing please find the Rebuttal Testimony of Julius A. Wright on behalf of Duke Energy Carolinas, LLC in the above referenced docket. By copy of this letter we are serving the same on the parties of record.

If you have any questions, please have someone on your staff contact me.

Yours truly,

ROBINSON, MCFADDEN & MOORE, P.C.

Frank R. Ellerbe, III

FRE/tch
Enclosures

cc/enc: Kodwo Ghartey-Tagoe, VP Legal, State Regulation (via email)
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BEFORE THE
PUBLIC SERVICE COMMISSION
OF SOUTH CAROLINA

In the Matter of

COVER SHEET

Application of Duke Energy Carolinas, LLC for
Approval of Decision to Incur
Nuclear Generation Pre-Construction Costs

DOCKET
NUMBER: 2007-440-E

(Please type or print)

Submitted by: Frank R. Ellerbe, IIISC Bar Number: 1866

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NOTE: The cover sheet and information contained herein neither replaces nor supplements the filing and service of pleadings or other papers as required by law. This form is required for use by the Public Service Commission of South Carolina for the purpose of docketing and must be filled out completely.

DOCKETING INFORMATION (Check all that apply)

- ☐ Emergency Relief demanded in petition ☐ Request for item to be placed on Commission's Agenda expeditiously
- ☒ Other: Rebuttal Testimony of Julius A. Wright

INDUSTRY (Check one)	NATURE OF ACTION (Check all that apply)			
<input checked="" type="checkbox"/> Electric	<input type="checkbox"/> Affidavit	<input type="checkbox"/> Letter	<input type="checkbox"/> Request	
<input type="checkbox"/> Electric/Gas	<input type="checkbox"/> Agreement	<input type="checkbox"/> Memorandum	<input type="checkbox"/> Request for Certification	
<input type="checkbox"/> Electric/Telecommunications	<input type="checkbox"/> Answer	<input type="checkbox"/> Motion	<input type="checkbox"/> Request for Investigation	
<input type="checkbox"/> Electric/Water	<input type="checkbox"/> Appellate Review	<input type="checkbox"/> Objection	<input type="checkbox"/> Resale Agreement	
<input type="checkbox"/> Electric/Water/Telecom.	<input type="checkbox"/> Application	<input type="checkbox"/> Petition	<input type="checkbox"/> Resale Amendment	
<input type="checkbox"/> Electric/Water/Sewer	<input type="checkbox"/> Brief	<input type="checkbox"/> Petition for Reconsideration	<input type="checkbox"/> Reservation Letter	
<input type="checkbox"/> Gas	<input type="checkbox"/> Certificate	<input type="checkbox"/> Petition for Rulemaking	<input type="checkbox"/> Response	
<input type="checkbox"/> Railroad	<input type="checkbox"/> Comments	<input type="checkbox"/> Petition for Rule to Show Cause	<input type="checkbox"/> Response to Discovery	
<input type="checkbox"/> Sewer	<input type="checkbox"/> Complaint	<input type="checkbox"/> Petition to Intervene	<input type="checkbox"/> Return to Petition	
<input type="checkbox"/> Telecommunications	<input type="checkbox"/> Consent Order	<input type="checkbox"/> Petition to Intervene Out of Time	<input type="checkbox"/> Stipulation	
<input type="checkbox"/> Transportation	<input type="checkbox"/> Discovery	<input checked="" type="checkbox"/> Prefiled Testimony	<input type="checkbox"/> Subpoena	
<input type="checkbox"/> Water	<input type="checkbox"/> Exhibit	<input type="checkbox"/> Promotion	<input type="checkbox"/> Tariff	
<input type="checkbox"/> Water/Sewer	<input type="checkbox"/> Expedited Consideration	<input type="checkbox"/> Proposed Order	<input type="checkbox"/> Other:	
<input type="checkbox"/> Administrative Matter	<input type="checkbox"/> Interconnection Agreement	<input type="checkbox"/> Protest		
<input type="checkbox"/> Other:	<input type="checkbox"/> Interconnection Amendment	<input type="checkbox"/> Publisher's Affidavit		
	<input type="checkbox"/> Late-Filed Exhibit	<input type="checkbox"/> Report		

BEFORE
THE PUBLIC SERVICE COMMISSION OF
SOUTH CAROLINA
DOCKET NO. 2007-440-E

Application of Duke Energy Carolinas, LLC for)
Approval of Decision to Incur)
Nuclear Generation Pre-Construction Costs)

REBUTTAL TESTIMONY OF
JULIUS A. WRIGHT FOR
DUKE ENERGY CAROLINAS

1 **I. INTRODUCTION**

2 **Q. PLEASE STATE YOUR NAME, OCCUPATION AND BUSINESS**
3 **ADDRESS.**

4 **A.** Julius A. Wright, President, J. A. Wright & Associates, Inc., 3037 Loridan Way,
5 Atlanta, Georgia 30339.

6 **Q. BY WHOM AND IN WHAT CAPACITY ARE YOU EMPLOYED?**

7 **A.** I am a consultant to regulated utilities and public bodies on issues related to
8 economics, economic modeling, regulatory policy, industry restructuring, and
9 resource planning. I am presenting testimony on behalf of Duke Energy
10 Carolinas, LLC ("Duke Energy Carolinas" or the "Company") in this docket.

11 **Q. PLEASE DESCRIBE YOUR EDUCATIONAL AND PROFESSIONAL**
12 **EXPERIENCE.**

13 **A.** I received an undergraduate degree from Valdosta State College (BS Chemistry),
14 an MBA in Finance from Georgia State University, and a Master's and Ph.D. in
15 Economics from North Carolina State University, where I focused on regulatory
16 and environmental economics. Among other past experiences, I served as a
17 Commissioner on the North Carolina Utilities Commission from 1985 to 1993. I
18 am currently President of J. A. Wright & Associates, Inc., a consulting firm that
19 specializes in gas, electric and telecommunications regulatory issues.

20 Over the past 14 years in my consulting practice I have dealt extensively
21 with electric and natural gas utilities focusing on a number of issues . In this
22 context, I have testified before regulatory commissions and legislative bodies,

1 presented studies and authored reports on issues related to electric and gas
2 regulation, and I have been a guest speaker at the Bonbright Conference, other
3 seminars, and at the Georgia Institute of Technology. I was also one of three
4 economists engaged by the California State Auditor to examine the problems that
5 led to that state's recent electric energy crisis. Furthermore, in the last few years I
6 have worked with several utilities on the most effective way to reorganize
7 transmission assets from both a business/marketplace structure and financial
8 structure, while accommodating the Federal Energy Regulatory Commission's
9 ("FERC's") transmission policies. See WRIGHT EXHIBIT 1 for additional
10 details on my background.

11 **Q. WHAT IS THE PURPOSE OF YOUR REBUTTAL TESTIMONY?**

12 **A.** I am responding to the direct testimony filed by Peter A. Bradford on behalf of
13 Friends of the Earth. I explain in my testimony that the South Carolina General
14 Assembly has specifically provided a statutory process for this Commission to
15 determine the prudence of Duke Energy Carolina's decision to incur pre-
16 construction costs for its William States Lee, III Nuclear Station ("Lee Nuclear
17 Station"). As opposed to Mr. Bradford's opinion, I do not believe that Duke Energy
18 Carolina's application in this proceeding, or the assurances provided for by the
19 General Assembly in the Baseload Review Act (the Act"), will harm customers. On
20 the contrary, it is my opinion that if the Commission does not approve the prudence
21 of Duke Energy Carolina's decision to incur pre-construction costs for the Lee
22 Nuclear Station as provided for by the General Assembly, customers could be

1 harmed because this greenhouse gas emission-free baseload generation resource
2 could effectively cease to be an option for Duke Energy Carolina's customers in
3 the 2018 timeframe.

4 **Q. HOW DID YOU PREPARE FOR THIS TESTIMONY AND WHAT**
5 **EXPERIENCE DO YOU HAVE THAT IS PARTICULARLY RELEVANT**
6 **TO THIS PROCEEDING?**

7 **A.** In preparing for this testimony I reviewed the Application filed by the Company
8 in this docket, the filed direct testimony of the other parties, the Baseload Review
9 Act, books on the subject of regulation and prudence, and some of my work
10 related to this Company's Integrated Resource Plan ("IRP"). I also reviewed
11 other documents or studies related to the issues being discussed in this case.

12 In terms of my experience in these matters, I have worked for the last 20
13 plus years in the field of electric and gas regulation, primarily in the Southeast
14 and often in South Carolina and North Carolina. This work has involved, among
15 other things, several studies related to forecasting future electric demand and
16 future electric prices, work related to reviewing or helping to prepare IRPs in both
17 South Carolina and North Carolina as well as other Southeastern states. In
18 addition, while serving as a North Carolina Utility Commissioner I participated in
19 the rate cases that brought into rates the last three nuclear plants built in South
20 Carolina and North Carolina. In short, I have rather unique experience in dealing
21 with nuclear power facilities and planning as it relates to this region of the
22 country.

1 I also served three terms in the North Carolina State Senate, thus I am
2 acutely aware of the legislative process that accompanies the passage of
3 legislation like South Carolina's Act. Furthermore, I was involved internally with
4 a South Carolina electric utility in reviewing this Act and proposed revisions as it
5 was being discussed and moving through the South Carolina Legislature (the
6 "Legislature"). Thus I also have what I feel is some pertinent qualifications with
7 respect to the various considerations related to the passage of the Act, its intent,
8 and how it relates to the current proceeding.

9 **Q. PLEASE SUMMARIZE THE BASIC POINTS IN YOUR REBUTTAL**
10 **TESTIMONY.**

11 **A.** Contrary to Mr. Bradford's opinion, I do not believe that Duke Energy Carolina's
12 application in this proceeding, or the assurances provided for by the General
13 Assembly in the Baseload Review Act (the Act"), will harm customers.

14 Mr. Bradford apparently bases much of his argument on the contention
15 that this hearing is related to the prudence of cost recovery of both
16 preconstruction and construction costs. First, the statutory process outlined in
17 South Carolina's Baseload Review Act is very specific about the procedures for
18 developing and approving a new nuclear plant. These procedures adequately
19 address all the issues Mr. Bradford raises and, contrary to his view, adequately
20 protect the interest of ratepayers. Moreover, while Mr. Bradford discusses cost
21 recovery at length in his testimony, the issue of recovery of pre-construction costs
22 is reserved for a separate proceeding as is the issue of recovery of plant

1 construction costs. In addition, unlike audits and prudence reviews conducted
2 after or near the time a plant is operational, as usually happened in the past, the
3 ongoing monitoring of costs and construction schedules by the Office of
4 Regulatory Staff, dictated by the Baseload Review Act, effectively provides an
5 ongoing and contemporaneous prudence review. I believe this can be a much
6 more effective and efficient review process if the objective is to base the review
7 on what is known and knowable at the time decisions are made – which is the
8 historical standard of review with respect to prudence reviews undertaken by
9 utility regulators.

10 One final important point that needs to be emphasized is that this hearing
11 is about planning for the future, keeping the nuclear option open, and the statutory
12 obligation that this Commission and Duke Energy Carolinas must fulfill in
13 planning and building to meet future electric demand using a reliable mix of fuel
14 resources. It is my opinion if the Commission does not approve the prudence of
15 Duke Energy Carolina's decision to incur pre-construction costs for the Lee Nuclear
16 Station customers could be harmed because this greenhouse gas emission-free
17 baseload generation resource could effectively cease to be an option for Duke
18 Energy Carolina's customers in the 2018 timeframe.

1 **II. RESPONSE RELATED TO THE ISSUE OF THE BASELOAD**

2 **REVIEW ACT AND PRUDENCE**

3 **Q. ON PAGE 5 OF HIS TESTIMONY, AT LINES 11 THRU 17, MR.**
4 **BRADFORD IMPLIES THAT THE PROCEDURES UNDER SOUTH**
5 **CAROLINAS BASELOAD REVIEW ACT PROVIDE DUKE ENERGY**
6 **CAROLINAS AN “EXTRAORDINARY BENEFIT.” DO YOU AGREE?**

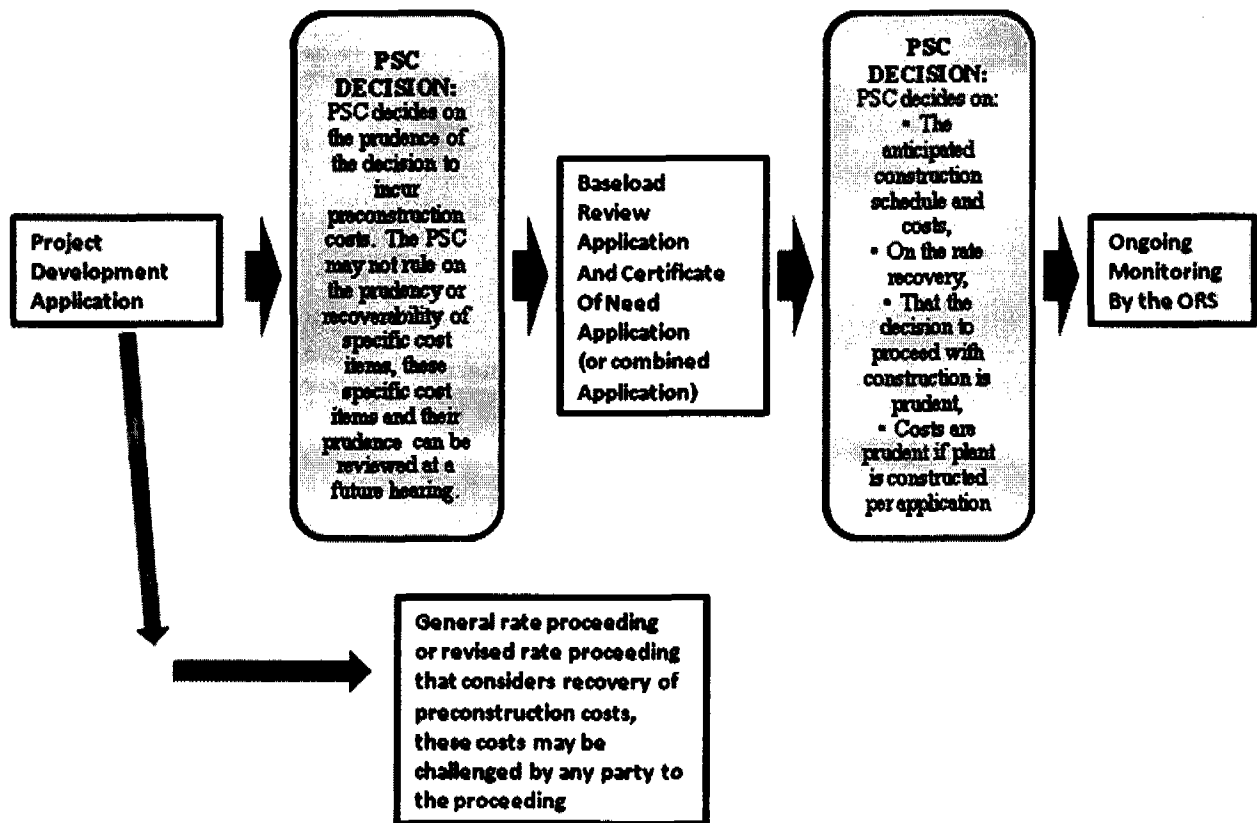
7 **A.** No, the notion that the Act gives Duke Energy Carolinas an extraordinary benefit
8 is simply not accurate. This claim is apparently based on Mr. Bradford’s
9 contention that the Act allows a finding of prudence related to “the decision to
10 construct the proposed nuclear unit” along with the recovery of “a very substantial
11 portion” of the planned construction costs of the plant before the plant’s final
12 impact on rates is determined (page 5, beginning on line 13). First, this hearing is
13 not about the recovery of plant construction costs. Contrary to Mr. Bradford’s
14 conclusion in his discussion on this point, Duke has not decided to build the plant
15 and appropriate filings involving that decision would come at a later date if and
16 when such a decision is made. Second, his opinion that the current statutory
17 framework in South Carolina under which this filing is made is somehow
18 improper or doesn’t protect ratepayers’ interest (which he suggests both here and
19 on the next page 6, lines 1 thru 3) is simply inaccurate in my opinion and does not
20 properly credit the various customer protections and regulatory oversight
21 contained in the Act. Third, I believe his statements regarding the concept of
22 prudence as it relates to regulatory oversight, both here and in later sections of his

1 testimony, yield an improper view as to the determination of prudence as it relates
2 to the recovery of costs in a regulatory setting.

3 **Q. IN YOUR PREVIOUS ANSWER YOU STATE THAT THE NOTION**
4 **THAT THE ACT GIVES DUKE ENERGY CAROLINAS AN**
5 **EXTRAORDINARY BENEFIT IS INACCURATE AND DOES NOT**
6 **PROPERLY CREDIT THE CUSTOMER PROTECTIONS AND**
7 **REGULATORY OVERSIGHT CONTAINED IN THE ACT. ON WHAT**
8 **DO YOU BASE THIS CONCLUSION?**

9 **A.** This statement is best explained by simply reviewing the process established by
10 the Act. The diagram below is a simplified view of the procedures established in
11 the Act. As this diagram illustrates, the process envisions three primary steps
12 (though along this three step process an applicant may file to recover pre-
13 construction costs in a separate proceeding and can file modifications to its plans
14 and for a review of rates). This three step process consists of (1) a project
15 development application, (2) a Baseload Review Application and what I will refer
16 to as a siting certificate or combined application, and (3) ongoing oversight and
17 monitoring by the Office of Regulatory Staff ("ORS"). As this diagram indicates,
18 Duke Energy Carolina's project development application at issue in this Docket is
19 the very first step of this process. The issue of recovery of pre-construction costs
20 is reserved for a separate proceeding. Moreover, as shown in the diagram, the
21 review of the costs related to plant construction are not addressed in this
22 proceeding, as Mr. Bradford would apparently prefer, but rather those costs are to

1 be filed and reviewed in the second step of this the process, called a Baseload
2 Review Application.



3 Q. DO YOU BELIEVE THE PROCESS PROVIDED UNDER SOUTH
4 CAROLINA'S BASELOAD REVIEW ACT PROPERLY ADDRESSES
5 THE COST CONCERNS AND THE INTERESTS OF RATEPAYERS
6 RAISED BY MR. BRADFORD?

7 A. Yes, the process in place in South Carolina will provide an adequate
8 review of all costs associated with the construction of the proposed Lee Nuclear
9 Facility and I believe, as did the South Carolina Legislature, that it will
10 adequately protect the interest of ratepayers. Indeed, the very title of the Act
11 begins with the declaration that the "Act [is] to protect South Carolina

1 ratepayers.” Moreover, if one reads the Act there are sufficient provisions for this
2 Commission and other parties to question all the costs related to the plant,
3 including the pre-construction costs. The provision for ongoing quarterly reports
4 and monitoring of the construction process by the ORS also provides protection
5 for customers.

6 I would add that from my experience as a legislator and in my work
7 following the development of this law, it is undeniable that a primary focus, and I
8 would say the primary focus, of the Legislature was the protection of South
9 Carolina’s ratepayers from excessive or imprudent costs coupled with a
10 reasonable process for monitoring the ongoing construction of a nuclear facility.
11 At the same time, in adopting the Act the Legislature had the additional purpose
12 of providing a more effective and efficient regulatory process that would promote
13 the construction of nuclear generation in South Carolina. In fact, prior to the
14 passage of the Baseload Review Act, the South Carolina Legislature, had
15 endorsed the development of new nuclear generating facilities in the state in its
16 June 1, 2006 Joint Resolution (H. 5236), “A Concurrent Resolution to Advance
17 the Need for Electric Utilities to Build New Nuclear Power Plants in South
18 Carolina and to Urge the Office of Regulatory Staff and the Public Service
19 Commission to Encourage Such Consideration.” In sum, I would suggest that Mr.
20 Bradford’s complaints about the statutory process are really not related to this
21 hearing, but would more properly be addressed to the South Carolina Legislature
22 and the procedures it has established under the Act and the Legislature’s decision

1 to support the development of nuclear generating plants for the benefit of its
2 citizens.

3 **Q. PLEASE EXPLAIN HOW THE ACT PROVIDES AN OPPORTUNITY TO**
4 **REVIEW THE PRUDENCY OF PRE-CONSTRUCTION COSTS?**

5 **A.** Contrary to Mr. Bradford's claims, there is ample opportunity for this
6 Commission and other parties to review and dispute specific pre-construction
7 costs. Let me explain by reviewing exactly what the Company is requesting in
8 this docket and what the Act requires at this stage of the process. The Company
9 has filed, pursuant to the Act, a Project Development Application which
10 establishes the need for the Company to preserve the Lee Nuclear Station as a
11 resource option to meet customers' continuing need for power and the need to
12 incur pre-construction costs for the facility. Under S.C. Code §58-33-225, the
13 Commission can issue a Project Development Order in this proceeding affirming
14 the prudence of the utility's decision to incur pre-construction costs for a nuclear
15 plant. But contrary to Mr. Bradford's assertions in his testimony, in issuing its
16 project development order, the PSCSC "may not rule on the prudence or
17 recoverability of specific items of cost." *Id.*

18 In a future proceeding, however, the project development costs "must be
19 properly included in the utility's plant-in-service and must be recoverable fully
20 through rates in future proceedings," unless the record in the future proceeding
21 shows that individual items of cost were imprudently incurred or that "other
22 decisions subsequent to the issuance of a project development order were

1 imprudently made considering the information available to the utility at the time
2 they were made.” S.C. Code Ann. §58-33-225(E).

3 **Q. IS THIS PRE-CONSTRUCTION PRUDENCE REVIEW UNIQUE TO**
4 **SOUTH CAROLINA?**

5 **A.** No it is not. Other states have regulatory policies that provide assurance of cost
6 recovery in advance of baseload plants, such as nuclear facilities, being
7 completed. For example, North Carolina has a statute, N.C. Gen. Stat. §62-110.7,
8 that is essentially identical to S.C. Code §58-33-225 in that it allows the North
9 Carolina Utilities Commission (“NCUC”) to approve the prudence of a utility’s
10 decision to incur nuclear project development costs, but does not allow the NCUC
11 to rule on the reasonableness or prudence of specific project development
12 activities or specific items of cost. Even before the enactment of this statute, the
13 NCUC authorized Duke Energy Carolinas to incur development costs for the Lee
14 Nuclear Station through December 31, 2007, not to exceed the North Carolina
15 allocable portion of \$125 million in its October 9, 2007 Order of Clarification
16 Concerning Development Costs in NCUC Docket No. E-7, Sub 819.

17 Likewise, Florida has a regulatory framework that allows for the recovery
18 of nuclear plant site selection and pre-construction costs even before construction
19 is complete and the plant is placed in service. Section 366.93 of the Florida
20 Statutes, which became law in June 2006, reflects the Florida Legislature’s
21 support for the development of new nuclear power generation in Florida. It
22 requires the Florida Commission to establish rules providing for alternative cost

1 recovery mechanisms for the recovery of costs incurred in the siting, design,
2 licensing, and construction of a nuclear power plant. It further requires such
3 mechanisms to be designed to promote utility investment in nuclear power plants
4 and to allow for the recovery in rates of all prudently incurred costs. As directed
5 by the Florida statute, the Florida Commission has adopted new rules that permit
6 investor-owned electric utilities to request partial recovery of the planning and
7 construction costs of a nuclear power plant prior to commercial operation of the
8 plant.

9 The Louisiana Public Service Commission also has issued an Order
10 entitled "Incentive Cost Recovery Rule for Nuclear Power Generation" that has a
11 three step process for cost recovery of nuclear generation that is similar to the
12 South Carolina process in that it addresses the issue of ongoing cost reviews and
13 the related prudence of these costs. The first step is for cost recovery of siting and
14 licensing, the second step addresses recovery of costs between licensing and
15 construction, the third step addresses construction cost recovery. A utility can
16 recover construction work in progress ("CWIP") at all three steps on the costs
17 approved up to that time, and there are annual reviews of the prudence of costs in
18 all three phases of the regulatory process.

19 Iowa, Kansas, and Wisconsin all have provisions for an electric utility to
20 apply in advance for the rate-making principle that will apply to the proposed
21 facility. This is similar to the provisions for establishing rate-making principles in
22 the Baseload Review Order following a Baseload Review Application.

1 **Q. SHOULD THE COMMISSION APPROVE DUKE ENERGY CAROLINA’S**
2 **REQUEST IN THIS HEARING, DOES IT REMOVE THE ISSUE OF**
3 **ADDITIONAL REGULATORY OVERSIGHT OF CONSTRUCTION**
4 **COSTS AND FURTHER PRUDENCE REVIEWS FROM FUTURE**
5 **CONSIDERATIONS?**

6 **A.** No it does not. Commission approval of Duke Energy Carolina’s request does not
7 remove the issue of additional regulatory oversight of construction costs and
8 further prudence reviews from future considerations. As I show in the diagram
9 presented above and as provided in the Act there is ample opportunity for other
10 parties, the ORS and this Commission to review and dispute future costs, both
11 construction and pre-construction. In addition, as I have already stated, if the
12 Company decides to proceed with construction and this decision is approved in a
13 future hearing called a Baseload Review Application, the Company will have to
14 provide ongoing quarterly monitoring reports to the ORS. Also under provisions
15 in the Act the ORS “shall conduct on-going monitoring of the construction of the
16 plant and expenditure of capital through review and audit of the quarterly
17 reports...and shall have the right to inspect the books and records regarding the
18 plant and the physical progress of construction upon reasonable notice to the
19 utility” (S.C. Code §58-33-277 (B)) This ORS monitoring and the required
20 quarterly reports actually increases the level of regulatory scrutiny of the
21 construction process as compared to what was required prior to the adoption of
22 the Act. Moreover, unlike audits and prudence reviews conducted after or near

1 the time a plant is operational, as usually happened in the past, the ongoing
2 monitoring dictated by the Act provides, in effect, an ongoing and
3 contemporaneous prudency review. I believe this can be a much more effective
4 and efficient review process if the objective is to base the review on what is
5 known and knowable at the time decisions are made – which is the historical
6 standard of review with respect to prudence reviews undertaken by utility
7 regulators.

8 **Q. MR. BRADFORD INDICATES ON PAGE 6, LINES 7-12, THAT**
9 **HISTORICALLY, UTILITY REGULATORS UNDERTOOK PRUDENCE**
10 **REVIEWS ALMOST ALWAYS AFTER EVENTS LED TO**
11 **SUBSTANTIAL RATES INCREASES. IS THIS RELEVANT TO**
12 **TODAY'S HEARING?**

13 **A.** It is not relevant to this case or what is being requested by the Company simply
14 because his assertion is predicated on the proposed Lee Nuclear Station being
15 built – and that decision has not yet been made. Mr. Bradford seems to lose sight
16 that the Company's application is an interim regulatory step to allow the
17 Company to proceed to incur pre-construction costs in order to develop the plans
18 and costs and maintain the Lee Nuclear Station as a future resource option
19 available by 2018 based on current timing estimates. At such time in the future
20 that the Company determines to proceed to construction of the Lee Nuclear
21 Station, it will first have to seek this Commission's approval.

22 However, his statement that regulators historically used an after-the-fact

1 prudence review is accurate. This historical perspective of prudence reviews
2 actually illustrates a major reason why I believe the South Carolina Legislature
3 adopted the Act – that being to move away from after-the-fact prudence reviews
4 and adopt a more contemporaneous, ongoing, and more closely monitored
5 construction process.

6 **Q. ON PAGE 7, LINES 2-6, MR. BRADFORD INDICATES THAT “A**
7 **TRANSACTION MAY PASS A REVIEW BASED ON THE LEVEL OF**
8 **INFORMATION PROVIDED IN THIS PROCEEDING ONLY TO BE**
9 **REVEALED AS IMPRUDENT BY LATER RATE IMPACTS...” IS THIS**
10 **AN APPROPRIATE GUIDELINE FOR THE DETERMINATION OF**
11 **PRUDENCE IN THE REGULATORY MODEL?**

12 **A.** The prudence standard he is suggesting is inconsistent with the new statutory
13 process provided in the Act and I believe it suggests a standard of prudence
14 review based on hindsight, as opposed to the contemporaneous auditing provided
15 in the Act. In addition, for his position to be relevant to this proceeding one must
16 assume that there is information that is known at the time of this proceeding that
17 either the Company or this Commission has withheld from the public. This is
18 simply not true. Second, his argument requires that even with an ongoing
19 monitoring of the construction process by the ORS, if circumstances lead to a
20 significant rate impact, this somehow automatically invokes the specter of
21 imprudence, even though information available at the time would not support
22 such a claim. This position, while relevant to the historical regulatory process, is

1 not really supportable under South Carolina's new procedures in that it invokes
2 what I would term a "hindsight" standard of review, which is an incorrect
3 interpretation of the prudence standard historically used by regulatory
4 commissions. Referring to Phillips¹;

5 *"Prudence thus involves foresight, not hindsight. Decisions must*
6 *be judged as to their reasonableness at the time they were made*
7 *and not after the fact."*

8 Professor Bonbright has used similar language in his book on regulation.
9 Therefore, to the extent that Mr. Bradford is suggesting that the mere presence of
10 a significant rate impact is sufficient reason to conclude that imprudent actions
11 occurred, regardless of South Carolina's new monitoring procedures under the
12 Act, is clearly an after-the-fact hindsight standard of review that should be
13 rejected.

14 **Q. ON PAGE 5, LINES 15-19, MR. BRADFORD SAYS THAT NEITHER A**
15 **PAPER MILL NOR AN OIL REFINERY "ENJOYS" THE ABILITY TO**
16 **RECOVER "A VERY SUBSTANTIAL PORTION" OF THEIR COSTS**
17 **BEFORE THE PLANT EVER OPERATES. IS THIS COMPARISON**
18 **REASONABLE?**

19 **A.** This comparison is unreasonable and immaterial to this proceeding. In the first
20 place, the Company does not seek in this proceeding to recover a "substantial
21 portion" of its costs before the plant operates, rather the recovery of both pre-

¹ Phillips, Charles F., "The Regulation of Public Utilities," Public Utility Reports, Inc., Arlington, VA, 1993, p340.

1 construction costs and plant construction costs are to be adjudicated in future
2 proceedings. In addition, oil refineries and paper mills are in competitive markets
3 which obviously have different operating and cost recovery parameters than does
4 Duke Energy Carolinas. For example, unlike Duke Energy Carolinas, neither oil
5 refineries nor paper mills have an obligation to serve all customers requesting
6 service. Also, because oil refineries and paper mills operate in competitive
7 markets, unlike Duke Energy Carolinas, they can establish whatever price they
8 desire, and can move their operations to another state or country. In short, Mr.
9 Bradford's example is irrelevant in this case.

10 **Q. ON PAGE 7, LINES 17-22, MR. BRADFORD SUGGESTS THE FAILURE**
11 **OF ENRON AND OTHERS INDICATES THAT ONLY AFTER THE**
12 **FAILURE WAS IMPRUDENCE REVEALED, AND THE SAME AFTER**
13 **THE FACT SITUATION IS TRUE FOR A UTILITY. IS HE CORRECT?**

14 **A.** He is not correct and again he seems to base this conclusion on the historical
15 regulatory model that examined nuclear cost overruns. This historical process
16 commenced investigations of prudence after the plant was at or near completion
17 and only after the impact of significant cost overruns was evident. South
18 Carolina's new process allows for ongoing monitoring and oversight during the
19 entire construction process, including specific attention to any changes from the
20 original plans related to the schedule or costs. Further, the Commission has
21 authority under Section 58-33-225(E) and (F) of the South Carolina statutes, to
22 deny cost recovery for individual items of costs if it determines in a subsequent

1 proceeding after issuing a project development order that such individual items of
2 cost were imprudently incurred or that other decisions subsequent to the issuance
3 of the order were imprudently made. In short, I believe this Commission has
4 ample authority to monitor Duke Energy Carolinas' conduct in a way that may
5 not be available in the competitive market environment that Mr. Bradford
6 continually relies on.

7 **Q. ON PAGE 8, LINES 2-5, MR. BRADFORD SAYS THAT "ONCE THE**
8 **SOUTH CAROLINA COMMISSION DETERMINES PRUDENCE IN**
9 **THIS PROCEEDING IT MAY BE FORECLOSED FROM REVISITING**
10 **THAT DETERMINATION EVEN IF LATER EVENTS REVEAL THAT IT**
11 **WAS QUESTIONABLE." IS THIS ACCURATE?**

12 **A.** It is not accurate in that it is misleading and it again mischaracterizes the statutory
13 process. What is accurate is that under the Act, once this Commission has
14 determined that the recovery of pre-construction costs is prudent, then this
15 decision cannot be revisited. However, as previously explained, S.C. Code §58-
16 33-225(E) and (F) allows for any party to seek the disallowance of the costs of
17 specific items in the future proceeding which addresses recovering the pre-
18 construction costs in rates.

19 **Q. ON PAGE 8, LINES 16 – 19, MR. BRADFORD STATES THAT IF THE**
20 **COMMISSION APPROVES DUKE ENERGY CAROLINA'S REQUEST**
21 **IT WILL "EXPOSE CUSTOMERS TO SOME RISK OF BEARING**
22 **IMPRUDENT COSTS." IS THIS TRUE?**

1 **A.** No, it is not true. As I stated in several prior answers, this case is about a Project
2 Development Application which, if approved, affirms the Company's decision to
3 incur pre-construction costs for the Lee Nuclear Station. With respect to the pre-
4 construction costs, as I stated above, S.C. Code §58-33-225(E) and (F) allows for
5 the Commission to disallow pre-construction costs in a future proceeding if
6 another party establishes the imprudence of specific items of cost.

7 **III. THE NEED FOR POWER AND THE COST OF THE**
8 **PROPOSED FACILITY**

9 **Q.** **MR. BRADFORD, AT THE BOTTOM OF PAGE 9 AND THE TOP OF**
10 **PAGE 10, DISCUSSES HOW "A STATUTORY" REQUIREMENT "FOR A**
11 **PRUDENCE DETERMINATION IS THAT THE POWER BE**
12 **NEEDED"...AND THAT "POWER COSTING TWENTY-FIVE CENTS**
13 **PER kWh" HAS "LITTLE OR NO NEED." PLEASE RESPOND TO THIS**
14 **STATEMENT?**

15 **A.** Again, Mr. Bradford's claims have no merit. First, there is ample evidence
16 discussed in the testimony of other Company witnesses and found in Duke Energy
17 Carolina's IRP that there is a growing need for baseload generation in South
18 Carolina and North Carolina (as well as throughout the Southeast). Second, his
19 statement about the power not being needed if it cost twenty-five cents per kWh is
20 not relevant to this hearing. Such a claim, albeit invalid, could be relevant if the
21 Commission were considering a Base Load Review Application or an application
22 for a certificate under the Utility Facility Siting and Environmental Protection

1 Act. Indeed, the Company has not even yet decided to build the plant. Third, Mr.
2 Bradford's cost per kWh is not consistent with the cost estimates provided in the
3 June, 2007 Keystone Center report that Mr. Bradford took part in. Fourth, I
4 would point to both Duke Energy Carolina's track record of building and
5 operating efficient nuclear units and this State's track record of low rates as
6 another reason to dispute Mr. Bradford's fears of "unaffordable" electric rates
7 resulting from this proposed facility. Indeed, if the Keystone projection is
8 accurate, even the "high" range of its levelized rate per kWh could likely be a
9 welcome relief to electric customers in higher cost states like New York (average
10 total and residential rate in 2007 of 15.27 and 16.89 cents/kWh respectively) or
11 Maine (average total and residential rate of 11.80 and 13.80 cents/kWh
12 respectively).

13 There is another important point that requires discussion with respect to
14 Mr. Bradford's comments. This hearing is really about planning for the future,
15 keeping the nuclear option open, and the statutory obligation that this
16 Commission and Duke Energy Carolinas must fulfill in planning and building to
17 meet future electric demand.

18 **Q. PLEASE DISCUSS YOUR LAST POINT THAT THIS HEARING IS**
19 **REALLY ABOUT PLANNING AND PREPARING FOR THE FUTURE.**

20 **A.** This Commission and this Company have a statutory obligation to ensure that
21 both current and future South Carolinians have available to them adequate levels
22 of reliable, reasonably priced electricity. To fulfill this obligation they

1 collectively undertake long-term planning and construction of generation
2 resources. And their track record indicates both parties have been very successful
3 in fulfilling this obligation. By any measure, Duke provides more reliable and
4 lower cost electric service than what is available in most other states and they
5 have proven to be one of the best nuclear generation companies in the country as
6 pointed out in the testimony of Mr. Jamil. The proof of the effectiveness of this
7 Commission and the electric utilities in this State is evidenced by the fact that this
8 State has historically been able to provide its citizens reliable and adequate
9 electric service at rates below the national average. In the latest EIA Annual
10 Report (Nov. 2007), South Carolina's average residential and average all sector
11 electric rates were 13.2% and 21.6% below the national average. Mr. Bradford
12 asserts that we should learn from the past (testimony pages 14 through 16). I
13 would agree, and thus I must point out that the track record of this Commission
14 and this Company is very good, and I believe that will continue, particularly given
15 the provisions in the Act.

16 I would also point out my past experience in dealing with these same
17 issues and in trying to plan generation resources 10 and 20 years into the future.
18 In a rapidly growing State like South Carolina (and North Carolina), neither the
19 Company nor the Commission has the luxury of waiting to see what happens or
20 continuing to delay making decisions on resource options. To put this in
21 perspective, since 1990, South Carolina's and North Carolina's combined
22 populations have grown by about 3.3 million people (a total growth in population

1 over these 17 years of about 33%). In just the last seven years, South Carolina's
2 and North Carolina's population has grown by 1.41 million people. In
3 comparison, the two Northeast states where Mr. Bradford was a state regulatory
4 commissioner have actually seen a population decline of over 600,000 people. In
5 my opinion, regulators in a high growth area like the Carolinas must approach
6 electric generation planning with a different focus, in terms of resource reliability,
7 diversity in fuel mix, and planning urgency, as compared to regulators in a state or
8 region with essentially stagnant population growth. Simply put, if we wait to see
9 if other options become viable, we may be too late.

10 **Q. IN HIS TESTIMONY ON PAGE 10, MR. BRADFORD ASSERTS THAT**
11 **THE COMMISSION SHOULD LOWER DUKE ENERGY CAROLINA'S**
12 **RETURN ON EQUITY BECAUSE THE BASELOAD REVIEW ACT**
13 **SHIFTS RISK FROM THE COMPANY'S INVESTORS TO THE**
14 **COMPANY'S CUSTOMERS. DO YOU AGREE?**

15 **A.** I disagree with Mr. Bradford. Again, the General Assembly debated and passed
16 the Baseload Review Act and made no provision for lowering a utility's
17 authorized return on equity ("ROE") because it was prudently incurring pre-
18 construction nuclear development costs. In addition, the arguments Mr. Bradford
19 and others use to oppose nuclear generation –such as unknown costs, uncertain
20 reliability, and high risk disposal issues – would argue that nuclear generation
21 increases the Company's risk which would equate to a higher return on equity.
22 Regardless, the issue of risk and the related return on equity is not relevant to this

1 proceeding.

2 **Q. MR. BRADFORD, AT PAGE 11 LINES 20-22, SAYS THAT NO COST**
3 **ESTIMATES ARE GIVEN IN THIS PROCEEDING. IS THIS CORRECT?**

4 **A.** He is technically correct but literally wrong, and he is again either
5 misunderstanding or misstating the purpose of this proceeding. When I say he is
6 technically correct but literally wrong I mean he ignores the fact that such
7 information was included in the Company's last integrated resource planning
8 process which led to the filing of the 2007 Annual Plan in November 2007. In
9 addition, that information will be updated in its next IRP filing in the last quarter
10 of this year. Moreover, that cost information is not required in this filing. This
11 proceeding is not to litigate and approve the construction costs for Lee Nuclear –
12 that would come in a future combined baseload review application proceeding.
13 This proceeding is to determine if it is prudent to incur pre-construction
14 development costs in a rising cost environment with many future regulatory
15 uncertainties – not the least of which is the form a future carbon regulation may
16 take. Duke Energy Carolinas believes that it is prudent to continue to incur pre-
17 construction costs to preserve the proposed Lee Nuclear Station as a resource
18 option at this time, and I agree.

19 **IV. LICENSING PROCESS AND OTHER ISSUES**

20 **Q. MR. BRADFORD TESTIFIES TO HIS SKEPTICISM OF THE**
21 **TESTIMONY OF DUKE ENERGY CAROLINA'S CHIEF NUCLEAR**
22 **OFFICER, MR. JAMIL, THAT THE LEE NUCLEAR STATION WILL**

1 **HAVE A CAPACITY FACTOR EXPECTED TO EXCEED 90%. DO YOU**
2 **HAVE AN OPINION AS TO LEE NUCLEAR STATION'S CAPACITY**
3 **FACTORS?**

4 **A.** I would certainly defer to Mr. Jamil, who has ultimate responsibility for the safe
5 and reliable operation of all of Duke Energy Carolinas' nuclear generating units.
6 I am not an expert on nuclear capacity factors, but I do know that Duke Energy
7 Carolina's units are among the top performers even among the U.S. fleet.

8 **Q.** **ON PAGES 17 AND 18 MR. BRADFORD DISCUSSES THE NRC**
9 **LICENSING PROCESS AND SUGGESTS THE NEW PROCESS MIGHT**
10 **BE COUNTERPRODUCTIVE. DO YOU AGREE?**

11 **A.** Again, I believe this issue has no bearing on the application in this docket. The
12 Baseload Review Act does not require the Commission to assess the NRC's
13 licensing process before approving such an application.

14 **Q.** **DO YOU HAVE ANY FURTHER THOUGHTS ABOUT THE FILING THE**
15 **COMPANY HAS MADE?**

16 **A.** Yes. There are several points I would like to make. First, contrary to much of
17 Mr. Bradford's testimony in this case, this hearing is not about construction costs
18 or prudence reviews of those costs, rather it is about planning electric generation
19 for decades to come and for South Carolinians yet unborn. In a high growth area
20 like South Carolina, the planning and construction of baseload generating
21 facilities is a process that requires commitments and planning years ahead of plant
22 operations. This is a burdensome responsibility, but history has proven that this

1 Commission has undertaken this responsibility with consistently positive results.
2 Now, as in the late 1970s and 1980s, this Commission and this Company is faced
3 with the prospect of planning, approving, and building significant levels of new
4 baseload generating facilities. It is my opinion, and this is supported by the South
5 Carolina and North Carolina Legislatures, that one piece of that future generation
6 mix should probably include the nuclear option.

7 This proceeding is about whether or not this nuclear option should be kept open as
8 a potential generation resource to serve this State in the 2018 timeframe – the
9 point in time when current studies indicate this generation would be needed. At
10 the same time, we should keep in mind that the last baseload plant Duke Energy
11 Carolinas brought onto its system was in 1986, that Duke Energy Carolinas has
12 several older coal fired plants that are facing retirement, that there is great
13 uncertainty about the issue of future carbon taxes or limitations, and this State is a
14 fast growing state in one of the fastest growing regions of the country. Given all
15 these considerations, I believe that approving the Company's request and
16 effectively keeping nuclear generation on the table as an option for the 2018
17 timeframe is prudent. In fact, given future uncertainty around carbon regulation,
18 it would seem to me to be imprudent not to continue to preserve nuclear as an
19 option at this time.

20 **Q. DOES THIS CONCLUDE YOUR TESTIMONY?**

21 **A.** Yes.

Julius A. "Chip" Wright is the President of J. A. Wright and Associates, 3037 Lorian Way, Atlanta, GA, 30339; 770-956-1225; jawright@mindspring.com.

Experience Overview

Prior to starting his firm, Dr. Wright was a Client Partner for AT&T Solutions Utilities and Energy Practice and before that a Principal in EDS' Management Consulting Services. Dr. Wright has been consulting electric gas, and telephone utilities on regulation, economics, rates, production modeling and strategic planning for the past three years. Prior to this Dr. Wright served an eight-year term as a Utility Commissioner for the state of North Carolina. Prior to that he served three terms in the North Carolina State Senate while he was a senior project engineer for Corning Glass Works on their optical wave guide project in Wilmington, North Carolina. He has a total of 14 years' government-related experience, 12 years' plant-related engineering experience, and he has established two companies.

While serving on the North Carolina Utility Commission, he served four years on the National Association of Regulatory Utility Commissioners (NARUC) Electricity Committee. He has served in various other advisory capacities, including the Keystone Committee on Externalities; the North Carolina Radiation Protection Committee, and on an Oversight Committee for a joint North Carolina/New York/ Department of Energy (DOE) project.

Dr. Wright has also served on the Southern States Energy Board Task Force on Restructuring the Electric Utility Industry.

Electric Competition Natural Gas, and Regulatory Strategy

- "Energy Deregulation," March 2001, report of the California State Auditor on the causes of the problems related to high electric prices and blackouts (from May, 2000 through June 2001, and ongoing) in California's restructured electric marketplace. Dr. Wright was one of three consultants who essentially researched and prepared the State Auditor's report.
- Principal author with Dr. Al Danielsen of "Reliability of Electric Supply In Georgia," published by The Bonbright Utilities Center, University of Georgia, June, 2001.
- Presented testimony before the North Carolina Public Utilities Commission on behalf of SCANA Corporation regarding issues related to market power in its merger with Public Service Company of North Carolina, Docket No. G-5, Sub 400; G-3, Sub 0.
- Was the principal author of a report and investigation titled "*An Analysis of Commonwealth Edison's Planning Process For Achieving Reliability of Supply*," which was an investigation of the Company's planning process to meet its statutory obligation for supplying electricity as Illinois transitions to a competitive retail electric market, Illinois Commerce Commission Docket No. 98-0514.
- Co-authored a national study that used computer modeling techniques to quantify the impact of electric competition on the

aggregate economy in each of the 48 continental United States.

- Presented testimony to Louisiana Legislative Committee on behalf of Entergy Corporation regarding the various regulatory and technical issues that need to be addressed in the transition to competition.
- Presented testimony For Virginia Power with regard to its transition to competition plan.
- Testified before the Mississippi Public Service Commission on issues related to the establishment of retail electric competition, including ISO establishment, regional power exchanges, legislation, taxes and regulatory policies.
- Presented testimony for Entergy Corp. in both Louisiana and Arkansas in support of its transition to competition filing.
- Worked with three major southeastern utilities on developing business and regulatory strategy as they prepare for competition.
- Filed a report with the South Carolina Legislature that studied the impact of electric competition on the state of South Carolina.
- Was a panelist on a Southern Gas Association national televised forum on performance based regulation for the natural gas industry.
- Was the lead policy witness for South Carolina Electric and Gas on obtaining regulatory approval to transfer depreciation reserve from a nuclear plant to T&D depreciation reserve. This is a critical issue in preparing for competition and limiting stranded investment.
- Developed regulatory and marketing strategy for ENTERGY with regard to its

telecommunications initiatives. In these efforts he worked with the EDS Telecommunications Consulting Group.

- Led an analysis of the prudence of Central Vermont Public Service Company's power and resource acquisitions over a five year period. The prudence of this utility's power supply strategy was under investigation in a rate case proceeding. Dr. Wright's team filed testimony supporting the Company and their efforts were instrumental in undermining the charges of imprudence brought by the Company's opposition.
- Developed an EDS intra-company task force to address the issues related to FERC's Transmission NOPR. This task force subsequently filed three responses to FERC's Open Access NOPR which provide a basis for EDS to maintain a leadership position as the electric utility industry undergoes restructuring to a competitive market.
- Helped develop a regulatory strategy and presented testimony on behalf of South Carolina Pipeline. In this case, an economic analysis prepared by Dr. Wright and Dr. Frank Cronin (from EDS Economic Planning and Analysis Consulting Group) was presented along with recommendations. Their analysis and recommendations were generally accepted by the Commission staff.

Resource Planning & Economic Analysis

As a Commissioner he has been involved in a variety of resource planning issues including chairing the last North Carolina Resource Planning hearing that involved Duke Power Company, Carolina Power and Light, Virginia Power Company and the North Carolina Electric Membership Corporation.

He was also selected by the states of North Carolina and New York and the Department of

Energy to be one of five representatives on a peer review panel overseeing a Resource Planning project being conducted by the Oak Ridge National Laboratories.

In addition to these initiatives Dr. Wright has:

- Was the principal author of a report and investigation titled "*An Analysis of Commonwealth Edison's Planning Process For Achieving Reliability of Supply*," which was an investigation of the Company's planning process to meet its statutory obligation for supplying electricity as Illinois transitions to a competitive retail electric market, Illinois Commerce Commission Docket No. 98-0514.
- Was the lead policy witness for South Carolina Electric and Gas on obtaining regulatory approval to transfer depreciation reserve from a nuclear plant to T&D depreciation reserve. This is a critical issue in preparing for competition and limiting stranded investment.
- Was instrumental in acquiring a large engagement for a major southeastern utility examining their competitive position as it relates to a competitive electric market. During the engagement he provided input and guidance on regulatory issues related to the deregulation of the electric industry.
- Assisted Carolina Power and Light Company in their integrated resource planning process by advising and facilitating a Commission directed public policy panel.
- Developed an overview of Niagara Mohawk Gas' integrated resource planning efforts. This engagement was under a contract from Oak Ridge National Laboratories.

Cost of Service, Rate Design, Forecasting

While serving more than eight years on the North Carolina Commission, Dr. Wright was involved in several cost of service and rate design analyses, testimonies, and orders. This included work in electric, telephone, gas, and water utilities. Additionally, he has presented testimony on performance based ratemaking and he has been involved in analyzing electric utility forecasting models, including end-use models, regression analysis (both linear and nonlinear) and customer discrete choice modeling forecasts. Furthermore, Dr. Wright's Ph.D. is in environmental and regulatory economics with special research into nonlinear minimal cost optimization procedures for electric utility production models. This work included optimizing investments, optimal regulatory regimes, pricing, cost recovery, and rate of return issues.

In addition, he has:

- Provided an economic analysis of the proper regulatory regime for South Carolina Pipeline Company. In this analysis he presented testimony supporting performance based rate making and his recommendations were generally accepted by the Commission staff.
- Developed forecasted rates for two New York state utilities. These rates were developed to support a bond filing by a cogenerator.
- Provided a forecast of power payments from New York State Electric and Gas (NYSEG) to two independent power producers (IPPs). This forecast was used to estimate the level of overpayments by NYSEG to these IPPs, under PURPA regulations, which he used in a filing before FERC supporting the

Telecommunications

As a Commissioner he has regulated all types of telecommunications providers for eight years. In addition, he has worked with two electric utilities in strategy formulation in regard to their entering the telecommunications business. Furthermore, he has eight years experience as a fiber optic engineer.

Other Areas of Expertise

Prior to joining EDS, he worked for eight years as a senior process engineer for Corning Glass in the design and production of optical waveguides (or fiber optics). Prior to that he worked for four years in the chemical industry as a process chemist and later as a senior project engineer. He has done work in environmental monitoring, process and product improvement, plant utilization, as well as starting and selling two successful companies – one in the financial leasing business and the other in the entertainment industry.

Presentations and Publications

“Energy Deregulation,” March 2001, report of the California State Auditor on the causes of the problems related to high electric prices and blackouts (from May, 2000 through June 2001, and ongoing) in California’s restructured electric marketplace. Dr. Wright was one of three consultants who essentially researched and prepared the State Auditor’s report.

“Low Cost States and Electric Restructuring - The Issue is the Price!” presented to the 1999 Miller Forum on Government, Business and the Economy, University of Southern California, April 19, 1999.

An Analysis of Commonwealth Edison’s Planning Process For Achieving Reliability of Supply, Illinois Commerce Commission Docket No. 98-0514.

The Impact of Competition on the Price of Electricity, author, published by L. A. Wright and Associates, November, 1998.

“Retail Competition in the Electric Industry: The Impact on Prices,” presented at the 18th Annual Bonbright Center Energy Conference, Atlanta, Georgia, Sept. 10, 1998.

Potential Economic Impacts of Restructuring the Electric Utility Industry, co-author, published by the Small Business Survival Committee, Washington, DC, November, 1997.

“How Deregulation Will Affect Power Quality and Energy Management,” presented at the Power Quality and Energy Management Conference co-sponsored by Entergy and EPRI, New Orleans, LA, Nov. 14, 1997.

“Deregulation of the Electric Industry,” *Proceedings: National Business Energy Forum,* June 26, 1997, New Orleans, LA.

“A Different View of the Market,” presented at the Southeastern Electric Exchange Conference, June 25, 1997, Charlotte, N.C.

“Restructuring The Electric Utility Industry: Theory vs. Reality,” presented at the American Bar Association Restructuring Conference, Raleigh, NC, Dec. 5, 1996.

“Restructuring: The Best Approach for Virginia,” presented at the Virginia State Corporation Commission Electricity Restructuring Forum, Charlottesville, VA, Nov. 15, 1996.

"Alternative Rate Making for the Natural Gas Industry: State Issues," presented at the Tenth Annual NARUC Biennial Regulatory Information Conference, Columbus, Ohio, Sept. 12, 1996.

"RetailCo: To Regulate or Not?" presented at the 9th Annual Automatic Meter Reading Symposium, New Orleans, La., Sept. 10, 1996.

"Convergence: The Competitive Revolution Comes To Electric Power," presented to the Southeastern Association of Regulatory Commissioners Annual Convention, Point clear, Alabama, June 4, 1996.

"Stranded Assets Recovery Issues," presented at the Western Electric Power Institute: Financial Forum, Tucson, Arizona, March 8, 1996.

"The Deregulation of the Electric Utility Industry : Current Status," presented at the North Carolina Economic Developers Association Midwinter Conference, Pinehurst, N.C., February 23, 1996.

"Performance Based Regulation for The Natural Gas Industry," panelist on Southern Gas Association's Televised Regulatory Forum, Dallas, Texas, Jan. 18, 1996.

"Industry Structure Should Meet Stakeholder Objectives," *Electric Light and Power*, Jan., 1996.

"Quantifying the Value of Stranded Investment: A Dynamic Modeling Approach," *Proceedings: Implementing Transmission Access and Power Transactions Conference*, Denver, Colorado, Dec. 14, 1995.

"Quantifying the Value of Stranded Investment: A Dynamic Modeling Approach," at the 15th Annual Bonbright Center Electric and Natural Gas Conference, October 9-11, 1995, Atlanta, Georgia.

Comments to FERC in the matter of Notice of Proposed Rulemaking on Open Access, Docket No. 95-9-000, 1995.

"The Road to Competition for Re-Regulated Industries," presented at the 1995 PROMOD users Forum, St. Petersburg, Florida, May 1, 1995.

"*Comparing New York State Electric and Gas Corporation's Non-Utility Generator Payments to Current Avoided Cost Rates*," report submitted in support of affidavit filed before FERC in Docket No. EL 95-28-000.

"A Solution To The Transmission Pricing and Stranded Investment Problems" *Public Utilities Fortnightly*, January 1995.

"Electric Utility Competition: The Winning Focus," presented at 1994 Southeastern Electric and Natural Gas Conference, Atlanta, Georgia, October 1994.

"*Gas Integrated Resource Planning: The Niagara Mohawk Experience*," for Martin Marietta Energy Systems, Inc., under contract to the United States Department of Energy, ORNL/SUB/93-03369.

"Future Regulation In the Water Industry - Can We Solve the Problems Before They Happen?" *Water*, Vol. 29, No. 2, pp. 14-17, Summer 1988.

"The Regulatory Process - Historical and Today," presented at Carolina Power and Light Company's IRP Public Participation Committee Seminar, June 1994.

"The Regulatory Role In DSM: Who Pays?" presented at Carolina Power and Light Company's IRP Public Participation Committee Seminar, June 1994.

"The Regulatory Process In North Carolina," North Carolina Telephone Association, June 1991.

Testimony

Provided testimony for Georgia Power in its 2007 Integrated Resource Plan reviewing the plan filed by the Company and discussing how its demand-side proposals were reasonable, compared the Company's demand-side proposals to those found in neighboring states, and discussed the application of the various tests used to evaluate demand-side programs (TRC, RIM, PTC), Docket number 24505-U, May, 2007.

Presented two testimonies before the South Carolina Public Service Commission on behalf of South Carolina Electric and Gas, Duke Energy and Progress Energy Carolinas in the investigation of adoption of energy efficiency and generation standards related to the Energy Policy Act of 2005, Dockets No. 2005-385-E and No. 2005-386-E, April, 2007.

Presented testimony before the North Carolina Public Utilities Commission on behalf of Duke Energy and Progress Energy Carolinas in the investigation of adoption of energy efficiency and generation standards related to the Energy Policy Act of 2005, November, 2006, Docket No. E-100, Sub 108.

Presented testimony before the North Carolina Public Utilities Commission on behalf of Duke Energy in the investigation of Duke Energy's 2006 Integrated Resource Plan, June, 2006, Docket No. E-100, Sub 103.

Provided testimony for Georgia Power in its 2005 Fuel Adjustment Hearing on the issue of the appropriate pricing methodology for the dispatch and sale of electricity in the Southern Company system, Docket number 19142-U, April, 2005.

Presented testimony on behalf of South Carolina Electric and Gas Company before the South Carolina Public Utility Commission for South Carolina Pipeline Company related to the

inclusion of a generating plant in rate base and to the recovery of RTO (Gridsouth) related costs, Docket No. 2004-178-E, October, 2004.

Presented testimony on behalf of Entergy Mississippi before the Mississippi civil court dealing with maintaining the confidentiality of special use contracts, August, 2004.

Presented rebuttal testimony before the South Carolina Public Utility Commission for South Carolina Pipeline Company related to the reasons for continuing a program that allows flexible, competitive based pricing for large, interruptible customers that have alternative fuels, Docket No. 2004-6-G, May 29, 2004.

Presented testimony before the Georgia Public Service Commission on the appropriate range for a return on equity earnings band (a form of performance based regulation) to set in a Savannah Electric & Power Company rate case, Docket No. 14618-U, April, 2002.

Presented testimony before the Georgia Public Service Commission on the appropriate range for a return on equity earnings band (a form of performance based regulation) to set in a Georgia Power Company rate case, Docket No. 14000-U, November 19, 2001.

Presented testimony before the Georgia Public Service Commission on behalf of Scana Energy Marketing related to affiliate relationships and the appropriate affiliate rules between Atlanta Gas Light Company's regulated and unregulated affiliates. Docket No. 146060-U, August 24, 2001.

Presented testimony before the North Carolina Public Utilities Commission on behalf of SCANA Corporation regarding issues related to market power in its merger with Public Service Company of North Carolina, Docket No. G-5, Sub 400; G-3, Sub 0.

Presented testimony before the South Carolina Public Service Commission on behalf of South Carolina Pipeline Corporation regarding issues related to its annual review of gas costs as reflected in its purchase gas adjustment charge, Docket No. 1999-007-G, September, 1999.

Presented testimony before the Arkansas Public Service Commission on behalf of Entergy Arkansas, Inc. regarding regulatory policies related to the definition of public utilities as it impacts citing requirements of non-utility owned generating facilities, Dockets No. 98-337-U, March 9, 1999.

Presented Rebuttal and Surrebuttal testimony before the Louisiana Public Service Commission on behalf of Entergy Louisiana, Inc. and Entergy Gulf States regarding regulatory policies related to stranded cost recovery and on the issue of whether investors have been compensated for the risk of not recovering stranded costs, Dockets Nos. U-22092SC and U-20925, September, 1998.

Presented testimony to the South Carolina Public Utility Commission for South Carolina Pipeline Corp. related to acquisition adjustments and regulatory policies related to performance based regulation, Docket No. 90-588-G, June, 1998.

Testified before the Mississippi Public Service Commission on issues related to the establishment of retail electric competition, including ISO establishment, regional power exchanges, legislation, taxes and regulatory policies, April 16, 17, 1997.

Support of Transition Proposals filed by Virginia Power Corporation, March, 1997.

Entergy Arkansas testimony in support of Transition to Competition Filing, 1997.

Entergy Louisiana testimony in support of Transition to Competition Filing, 1997.

Support of Performance Based Regulation for GTE South Inc., Docket No. P-19, Sub 277, before the North Carolina Utility Commission, filed Nov. 22, 1995.

Stranded Cost Regulatory Policy and Recovery Testimony before the South Carolina Public Service Commission, the Commission approved the request Dr. Wright was advocating, Docket No. 95-1000-E, October 27, 1995.

Performance based rate making mechanism and rate levels, testimony on behalf of South Carolina Pipeline Corporation, Docket No. 90-588-G, filed August 3, 1995.

Prudence Review of Power Resource Planning for Central Vermont Public Service Company, Docket No. 5724, September 7, 1994.

Rebuttal testimony on behalf of Central Vermont Public Service Company, Docket 5724, September 7, 1994.

Surrebuttal testimony on behalf of Central Vermont Public Service Company, Docket No. 5724, September 9, 1994.

Education

Dr. Wright received a Ph.D. in Economics from North Carolina State University, focusing on regulatory and environmental economics, and is a member of the honor society.

He received an MBA in finance from Georgia State University in 1978, graduating with honors.

He received a Master of Economics from North Carolina State University in 1991 and was a member of the honor society.

He received a B.S. in Chemistry from Valdosta State College in Valdosta, Georgia, graduating Magna Cum Laud.

JULIUS A. WRIGHT, PH.D.

Wright Exhibit No. 1

In addition, he has completed the Michigan State University Regulatory Course, several other NARUC courses on regulation, been an instructor on regulatory issues at several NARUC courses, completed management courses at Corning Glass and financial seminars at Bank Boston and Merrill Lynch dealing with regulation.

**BEFORE
THE PUBLIC SERVICE COMMISSION
OF SOUTH CAROLINA
DOCKET NO. 2007-440-E**

In the Matter of)

CERTIFICATE OF SERVICE

Application of Duke Energy Carolinas, LLC)
for Approval of Decision to Incur Nuclear)
Generation Pre-Construction Costs For the)
Lee Nuclear Station in Cherokee County)

This is to certify that I, Leslie L. Allen, a legal assistant with the law firm of Robinson, McFadden & Moore, P.C., have this day caused to be served upon the person(s) named below the **Rebuttal Testimony of Julius A. Wright on behalf of Duke Energy Carolinas, LLC** in the foregoing matter by placing a copy of same in the United States Mail, postage prepaid, in an envelope addressed as follows:

Nanette S. Edwards, Esquire
C. Lessie Hammonds, Esquire
Office of Regulatory Staff
P.O. Box 11236
Columbia, SC 29211

Scott A. Elliott, Esquire
SC Energy Users Committee
Elliott & Elliott, PA
721 Olive Avenue
Columbia, SC 29205

Robert Guild, Esquire
Friends of the Earth
314 Pall Mall
Columbia, SC 29201

Dated at Columbia, South Carolina this 2nd day of April, 2008.



Leslie L. Allen